

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

**WETLAND WILDLIFE HABITAT MANAGEMENT
(ACRE)
Code 644**

DEFINITION

Retaining, creating, or managing wetland habitat for wildlife.

prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

PURPOSE

To protect, develop, or improve habitat for waterfowl, furbearers, or other wildlife.

CONDITIONS WHERE PRACTICE APPLIES

On wetland and areas where water can be impounded or regulated by diking, ditching, or flooding.

2. A Corps of Engineers 404 permit is required for any modification that results in placement of fill or dredge material in certain wetlands. See General Manual Part 405.03(c). (State government may require additional permits for wetland modification.)

PLANNING CONSIDERATIONS

1. Wetland areas are defined for NRCS purposes in the following two ways:
 - A. NRCS Wetland policy is based on "Wetlands of the United States," Circular 39, published in 1956, by the U.S. Department of Interior, Fish and Wildlife Service. A copy of this publication should be available for reference in all area offices. Refer to Biology Technical Note #2 for general descriptions of wetlands type 1 through type 5 found in Iowa.
 - B. For Food Security Act applications, wetlands are defined as areas that have a predominance of hydric soils and that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a

Water Quantity

1. Soil texture and bulk density affect the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and groundwater recharge. Loamy and clayey soils with high bulk density increase volume and rate of runoff, transportation, and evaporation. They decrease infiltration, deep percolation, and groundwater recharge. Sandy soil may increase infiltration, deep percolation, and groundwater recharge. It may decrease volume and rate of runoff, evaporation, and transpiration.
2. Sandy soils reduce downstream flow and increase the charge to aquifers. Loamy and clayey soils increase downstream flow and reduce the charge to aquifers. These effects may cause other undesirable environmental, social, or economic effects.
3. Loamy and clayey soils with normal bulk densities hold more available

water which could increase transpiration and plant growth. Sandy soils hold less available water which may reduce transpiration and plant growth.

Water Quality

1. Wetlands will reduce the movement of sediment and their attached substances. Ponding will reduce the amount of soluble substances carried in runoff.
2. Many nutrients and pesticides can be retained in wetlands and reduced in off-site surface water. Loamy and clayey soils will reduce the amount of nutrients and pesticides reaching the groundwater. Sandy soils will increase the amount of nutrients and pesticides reaching the groundwater.
3. Loamy and clayey soils will reduce the movement of dissolved substances below the root zone and to groundwater. Sandy soils will increase the movement of dissolved substances below the root zone and to groundwater.

SPECIFICATIONS

Preservation or maintenance of existing habitat (minimum treatment).

1. Protect from draining, grazing, uncontrolled fires, and soil deposition.
2. Control unwanted vegetation by mowing, burning, cutting, intensive short term grazing, or with herbicides.* Mow after July 15th to avoid disturbing ground nesting birds and avoid using chemicals that could eliminate submerged aquatic plants or aquatic organism important to waterfowl diets. Refer to Prescribed Burning (338).

*Herbicides will be applied in accordance with authorized, registered uses and directions on the label.

A. Improvement of existing wetlands.

- (1) All wetlands should be fenced to control livestock. Allow a minimum of 20 feet of land along the water's edge in the fenced out area.
- (2) Where applicable, construct a dam and water control structure adequate to provide a minimum water depth of 3-1/2 feet to control rooted, emergent vegetation.
- (3) The goal should be good interspersed of emergent vegetation and open water. Approximately 50 percent vegetation and 50 percent open water is a good mixture.
- (4) Build nesting structures for various species of waterfowl. See Biology Technical Note No. 11.
- (5) Where applicable, provide resting sites of floating logs or bales of straw or hay.
- (6) If soil conditions permit, seed buckwheat, grain sorghums, millet, or corn in prepared seedbeds or by broadcasting on moist mudflats. See Iowa Job Sheet Biology 3, Waterfowl Food Plants and their Management.

B. Permanent waterfowl impoundment.

This type of development is intended to supply food, nesting, and resting areas for waterfowl.

- (1) Construct an excavated or embankment pond meeting conservation standards and specifications for structures.
- (2) Minimum surface area will be 0.5 acre.
- (3) The principal spillway shall have capacity to pass the peak flow expected from a 10 year – 24-hour rainfall with the water level returning to the pre-storm elevation within 24 hours.
- (4) Approximately 50 percent of the pool area at design level shall be a minimum of 3-1/2 feet deep and scattered around the pond. The remaining pool area shall be less than 3-1/2 feet.
- (5) If practical, construct a water control structure to manipulate water levels for management purposes. Dabbling ducks have an optimum foraging depth of 2-10 inches. Diving ducks require over 10 inches. See Standard and Specification 587, Structure for Water Control.
- (6) Livestock shall be excluded from the impoundment and a minimum 20 feet of shore surrounding the impoundment.
- (7) Plant adapted millets, grain sorghums, buckwheat, corn, or utilize adjacent fields after harvesting for waterfowl food. Plant either on prepared seedbeds or by broadcasting on moist mudflats. See Iowa Job Sheet Biology #3,

Waterfowl Food Plants and their Management.

- (8) The shoreline may be seeded to adapted grasses or legumes to provide browse or nesting cover.

C. Seasonally flooded waterfowl impoundments.

- (1) Construct embankments on relatively level land meeting Standards and Specifications for Dike (356). Minimum size shall be 0.5 acre.
- (2) Install a water level control structure to permit drainage for crop production and flooding of mature crops during the fall migration.
- (3) When applicable, plant millets, sorghums, buckwheat, or corn, by broadcasting on moist mudflats or in a prepared seedbed.
- (4) Flood the mature crops to a depth of 15 inches before fall migration begins. After fall migration, draw down water level to permit spring planting.
- (5) Appropriate permits must be obtained by the cooperator if public water is used.

D. Islands for resting, nesting, or hunting blinds.

- (1) Minimum size shall be 20 feet in diameter. Location shall be at least 30 feet from the shoreline with intervening water at least two feet deep.

- (2) Build islands two feet above the normal water level expected June 1 with 25 percent of the side slope 5:1 or flatter.
- (3) One island for each two acres of surface water is suggested.
- (4) Allow the island to revegetate naturally or seed to native or adapted grasses. Refer to Conservation Cover (327) and Critical Area Planting (342).

E. Water impoundments for furbearers.

- (1) Construct a water control structure that will maintain the water level between six and twelve inches during the growing season to encourage emergent, aquatic food plants important to muskrats.
- (2) Gradually raise water level to three or four feet beginning September 1 to keep food plants available during winter period.

REFERENCES

Biology Technical Notes #2, #11, #17, and #18.

Biology Job Sheets #3 and #6.

Ponds and Marshes for Wild Ducks on Farms and Ranches in the Northern Plains. Farmers' Bulletin No. 2234, USDA.